BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Develop an Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements.	Rulemaking 16-02-007 (Filed February 11, 2016)

COMMENTS OF THE CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES ON ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENT ON PROPOSED PREFERRED SYSTEM PORTFOLIO AND TRANSMISSION PLANNING PROCESS RECOMMENDATIONS

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For: CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES

Dated: January 31, 2019

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The Center for Energy Efficiency and Renewable Technologies (CEERT) respectfully submits these Comments on the Administrative Law Judge's Ruling Seeking Comment on Proposed Preferred System Portfolio and Transmission Planning Process Recommendations, issued January 11, 2019 (ALJ Ruling). These Comments are timely filed and served pursuant to the Commission's Rules of Practice and Procedure and the ALJ Ruling.

I. OVERVIEW

By the ALJ Ruling, parties were invited to comment on the ALJ Ruling and respond to the questions contained in the ALJ Ruling. In addition, parties were invited to comment on Attachment A to the ALJ Ruling which is the "Proposed Preferred System Portfolio for IRP 2017-2018: System Analysis and Production Cost Modeling Results" (Attachment A) and Attachment B to the ALJ Ruling which is the "Proposed IRP Portfolios for the 2019-20 CAISO Transmission Planning Process" (Attachment B).

II. CEERT COMMENTS ON THE ALJ RULING AND ATTACHMENTS A AND B

The ALJ Ruling proposes that the Commission adopt the Hybrid Conforming Portfolio (HCP) as the Preferred System Plan (PSP) and submit the portfolio to the California Independent

System Operator's (CAISO's) Transmission Planning Process (TPP) for analysis for transmission needs. CEERT recommends that the Commission not adopt a PSP in this round of the Integrated Resource Planning (IRP), as there is no viable portfolio that meets State policy. A PSP is not required by Statute or necessary for procurement authorization.

It is essential that any portfolio submitted to the CAISO for the policy-driven base case be in line with State policy. Transmission development takes significantly longer than resource planning and procurement and thus must be initiated now in order to ensure the resources needed to meet Senate Bill (SB) 100 and Executive Order B-55-18 are available.

CEERT urges the Commission to take the lessons learned from the 2017-18 IRP cycle to improve the 2019-20 IRP cycle in order to ensure that the resulting LSE plans do not again miss the greenhouse gas (GHG) target. To accomplish this goal, the Commission must re-evaluate the methodology and modelling tools used to develop the Reference System Plan (RSP), as the Load Serving Entity (LSE) Plans are currently directly dependent on outputs from the RSP in the Clean Net Short (CNS) Methodology. CEERT again recommends a joint agency effort with LSEs and Public Owned Utilities to identify the challenges and a path to solutions, as well as determining how IRP processes can best be used to implement SB 100.

III.
CEERT RESPONSES TO SECTION 2.3 QUESTIONS

1. **Do you support the staff recommendation that the Commission adopt the hybrid conforming portfolio as the basis for the Preferred System Plan for the 2017-2018 IRP cycle? Why or why not?**

CEERT does not support the Commission adopting the HCP for the basis of the PSP for the 2017-18 IRP cycle. The HCP does not meet the GHG or RPS targets for 2030. Although SB 100 was passed after LSE plans were developed, adopting the HCP would result in the Commission endorsing a plan that does not meet the statutory requirements of SB 100. If the

Commission chooses not to adopt a PSP, it would signify an acknowledgement of the State's goal to decarbonize the electric sector. The Commission would still have the authority to authorize any procurement indicated in Investor Owned Utility (IOU) IRPs.

2. **If you do not recommend the hybrid conforming portfolio form the basis for the PSP, what portfolio should the Commission utilize and why?**

CEERT recommends that no PSP be adopted at this time. There is no statutory requirement or near-term procurement requirement for the Commission to adopt a PSP.

3. **Are there reasons for the Commission to utilize a different portfolio (or portfolios) for transmission infrastructure planning (in the TPP) as distinct from the portfolio describing procurement actions of LSEs? Discuss.**

Transmission planning, approval and construction takes years beyond the certainty of the current planning and procurement of LSEs. The portfolios describing the procurement actions of LSEs have been described as uncertain by LSEs for the timeframe in which new transmission is likely needed. Additionally, the HCP does not meet the GHG target adopted by the Commission or the new legislative mandate of a 60% RPS by 2030. While the 2017-18 IRP cycle has been viewed as a "trial run" by the Commission, transmission investments must be made in the near-term in order to facilitate the development of resources needed to meet SB 100 goals.

4. **Comment on whether or not the hybrid conforming portfolio is likely to result in a reliable system in 2030.**

CAISO modelling of the HCP indicated that the portfolio will not result in a reliable system in 2030, as there are multiple hours with over a 1,000 MW shortfall in the production cost modelling.[1] CAISO's stochastic modelling confirmed that a shortfall is anticipated.[2] Given the differences between Commission and CAISO modelling results, it is unclear whether the

[1] Reliability Assessment of the IRP Hybrid Conforming Plan, California ISO, at Slide 18. http://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/UtilitiesIndustries/Energy/EnergyPrograms/ElectPowerProcurementGeneration/irp/2018/4.%20CAISO%202017-18%20IRP%20HCP%20Analysis_01032019.pdf

[2] Reliability Assessment of the IRP Hybrid Conforming Plan, California ISO, at Slide 35.

HCP is reliable. Instead, CEERT recommends that the Commission and CAISO develop a gas retirement and low carbon replacement strategy to mitigate reliability concerns related to the uncertainty of gas capacity.

5. **Are the adjustments made by staff to the geographic resource allocations proposed by LSEs to develop the hybrid conforming portfolio, as described in Section 2.1 above, warranted? What modifications would you make to these assumptions and why?**

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

6. **Comment on the implications of the increased reliance on imports represented by the hybrid conforming portfolio.**

The reliance on imports in the HCP is consistent with the current reliance on imports into California. In 2017, 21% of energy supplied on the CAISO grid was from imports.[3] It is more likely that the RSP illustrated an unrealistically low reliance on imports, given California's history as a net-importer. The Commission should examine the potential impact of tightening supply throughout the West in the next decade on reliability in California.

7. **Comment on the hydroelectric feasibility analysis conducted by staff. Should the Commission require additional or different approaches to reliance on hydroelectric resources? What are your specific recommendations?**

While the hydroelectric feasibility analysis is a good start to determine the feasibility of the reliance on hydroelectric resources from the Pacific Northwest in many of the LSE plans, further information and analysis is needed to determine the feasibility. First, the nature of current and proposed contracts should be identified. Hydroelectric resource availability changes seasonally and transmission availability greatly varies by time of day and year. Energy-only contracts would likely result in imports when the transmission system is the least constrained and

[3] CAISO 2017 Annual Report on Market Issues and Performance, at p. 42. http://www.caiso.com/Documents/2017AnnualReportonMarketIssuesandPerformance.pdf

supply is high due to spring run off. The timing of hydro availability would make a significant impact on the ability to utilize hydro to reduce GHG emissions. While CEERT is highly supportive of increasing coordination between California and the Pacific Northwest to share low carbon resources, further analysis and coordination is needed to realize the benefits.

8. **Comment on any actions the Commission should take to mitigate drought risk, especially for in-state hydroelectric resources.**

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

9. **Comment on the potential for WECC-wide resource shuffling and how the Commission should address it.**

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

10. **Comment on additional hydroelectric analysis that should be conducted in the future.**

See response to Question 7.

11. **Comment on the calibrated LOLE study conducted for 2030. What are the implications or policy actions that should result, if any?**

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

12. **Comment on the differences between the hybrid conforming portfolio and the portfolio associated with the RSP calibrated to the 2017 IEPR assumptions. What are the implications of these differences and how should they be addressed?**

The GHG emission results from the HCP demonstrate how important it is to thoughtfully develop an RSP with appropriate modelling tools. It is clear that the errors in the RESOLVE model with regards to GHG emissions and over-simplified operating assumptions carried through to the LSE plans. The CNS methodology is dependent on the GHG emission intensity of

"system power" in the RESOLVE model to determine whether or not LSE plans meet their GHG target. Given this, it is no surprise that the aggregated LSE plans do not meet State Policy goals.

CEERT reiterates that it is vital to take a step back going into the 2019-20 IRP cycle and evaluate methodology and modelling tool options for RSP development. CEERT is not convinced that RESOLVE was developed to solve the types of planning and operational challenges that must be confronted in order to reach SB 100 goals. CEERT recommends that the timing aspect of procurement be deemphasized in RSP development so more spatial granularity can be applied. It is likely more appropriate to emphasize the timing aspect of procurement needs identified in the RSP during LSE plan development.

13. Comment on the criteria pollutant emissions results for the hybrid conforming portfolio. Is there further analysis that staff should conduct on criteria pollutant emissions for these high-level portfolio purposes? Explain.

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

14. Comment on the GHG emissions results from the hybrid conforming portfolio analysis in SERVM. What are the implications and what should the Commission change as a result? (presuming that a new RSP will be analyzed in 2019-2020 already.)

See the response to Question 12.

15. Comment on the curtailment results of analyzing the hybrid conforming portfolio.

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

16. Should the Commission place additional or tighter requirements on LSEs filing IRPs in the next IRP cycle? Suggest specific requirements and explain your rationale.

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

17. Comment on any other aspects of the hybrid conforming portfolio analysis.

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

IV.
CEERT RESPONSES TO SECTION 3.3 QUESTIONS

18. Should the hybrid conforming portfolio be analyzed as the reliability base case in the 2019-20 TPP? Why or why not? What changes would you recommend?

The HCP should not be analyzed as the reliability case in the 2019-20 TPP. CEERT recommends the RSP 42 MMT Case submitted to the CAISO in the 2018-19 TPP be analyzed as the reliability case in the 2019-20 TPP. The CAISO has previously analyzed this portfolio and is more consistent with State policy than the HCP.

19. Should the hybrid conforming portfolio be analyzed as the policy-driven base case in the TPP? Why or why not? What changes would you recommend?

CEERT does not recommend that the HCP be analyzed as the policy-driven case in the TPP, largely because it does not achieve any of the policy goals that the State is striving to meet in the electric sector. The estimated GHG emissions from the HCP are either on the very high end or outside the CARB Scoping Plan range, depending on the amount combined heat and power still online in 2030, and the 60% RPS target is not met.

CEERT recommends Case C, the 32 MMT case with new transmission for New Mexico and Wyoming wind, be submitted as the policy-driven base case. Given the discrepancies in GHG emissions from RESOLVE model developed portfolios, a 32 MMT case would likely

result in emissions in the mid-range of the CARB scoping plan. The Commission's analysis shows that just utilizing existing transmission, as in Case B, will be more expensive than building new transmission to reach the GHG target and realistically, new out of state resources will be required to meet SB 100 goals.

20. What are the potential implications if the CAISO analyzes the hybrid conforming portfolio and takes transmission investments to the CAISO Governing Board, if the resource procurement by LSEs between now and 2030 turns out to be significantly different than the hybrid conforming portfolio suggests? If this is a concern, suggest potential remedies or other analysis or actions that could be taken.

It is highly unlikely that the resources included in the HCP are *not* needed to reach the electric sector GHG targets, given how high the estimated GHG emissions are from the HCP. Significantly *more* resources will be needed to reach SB 100 targets so the resources included in the HCP would likely be included in any portfolio that meets State goals, along with additional resources. The HCP is too conservative for transmission planning and would likely hinder progress towards decarbonizaing the electric sector.

21. Do you support the staff recommendation to transmit two policy-driven sensitivity scenarios (Case B and Case C) to the CAISO for further analysis as policy-driven sensitivity scenarios? Why or why not? What changes would you make?

CEERT recommends Case B be submitted as the policy-driven base case.

22. Do you agree with the Commission staff assumptions used to development policy-driven sensitivities, with respect to electric vehicle load, GHG emissions constraints in 2030, etc? Explain in detail.

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

23. Comment on any other aspects of the Commission's recommendations to the CAISO for TPP purposes.

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

V.
CEERT RESPONSES TO SECTION 4.1 QUESTIONS

24. What further policy or procurement actions should the Commission take as a result of the analysis presented in this ruling? Explain your recommendations in detail.

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

25. Is an increase in the RPS compliance requirement, beyond 60 percent RPS in 2030, warranted? Why or why not?

Beyond statutory requirements, the Commission should plan based on GHG reductions. This may result increased renewable energy beyond the RPS target, but should be based on GHG reductions. While a pure focus on replacing MWHs with renewable energy has resulted in GHG reductions until recently, reaching SB 100 goals will require more thoughtful analysis of how to replace dependence for capacity and reliability services on gas generators. A focus on meeting more stringent RPS requirements, instead of GHG reductions, may miss the complexities of decarbonizing the "second half" of the grid.

26. Acknowledging that near- and mid-term reliability issues have been addressed in comments in response to a separate ruling in this proceeding, should the Commission order any resource procurement in the context of the IRP proceeding at this time? How much? Explain your rationale.

CEERT does not have a response to this question at this time, but reserves the right to respond in Reply Comments.

VI.
CONCLUSION

In conclusion, CEERT recommends that the Commission not adopt the HCP as the PSP. It neither achieves the RPS mandate, nor the GHG target target adopted by the Commission. CEERT recommends that Case B, a 32 MMT portfolio with available New Mexico and Wyoming wind, be transmitted to the CAISO as the policy-driven base case, due to the significant time constraints in developing new transmission likely required to reach SB 100 goals.

Respectfully submitted,

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